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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Klaus Irrgang

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EXAMINER

VERBITSKY, GAIL KAPLAN

ART UNIT

PAPER NUMBER

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/588,826	Applicant(s) IRRGANG ET AL.	
	Examiner Gail Verbitsky	Art Unit 2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 22-30 and 35-37 is/are rejected.
- 7) ☒ Claim(s) 31-34 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/09/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

Claims 31-32, 34 are objected to because of the following informalities:

Claims 31-32: these claims are redundant.

Claim 34: It is not clear how claim 34 is dependent on claim 34. Please note, in the rejection on the merits, claim 34 is considered to be dependent on claim 33.

Appropriate correction is required.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “the fitting” must be shown or the feature(s) canceled from the claim(s) 31-32. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

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application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected because "the fitting" as claimed in claims 21-32 and the methods of "machining", "deep drawing" and "drilling" have not been described in the specification.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The term "significant" in claim 35 is a relative term which renders the claim indefinite. The term "significant" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 22-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. (U.S. 6501366) [hereinafter Takahashi 1] in view of Davis.

Takahashi 1 discloses in Fig. 1 a (high) temperature sensor comprising a thermistor 11 is somewhat encapsulated (surrounded by) in a ceramic casing (alumina/ high temperature resistant cement)/ capillaries 50 (and auxiliary ceramic component 40), the ceramic casing 50 is being surrounded by a ceramic (alumina based) adhesive material/ powder 70. The thermistor 11 is connected to an electrical connecting cable 20 by means of wires. The wires are arranged in a metal protective tube 60. The device has an auxiliary component (metal intermediate jacket) 40 arranged proximate to connection of the connecting cable 20. The cable 20 is circumferentially (collar) welded to the protective jacket 40. The device has a sealing collar 61 on the protective tube 60. For claims 25-26: internal conductors 21 are insulated with a ceramic powder (high temperature resistant cement) 22. The jacket 40 is sufficiently long, as required by claims 25-26.

For claim 27: the use of the particular material, i.e., platinum thin film for the measuring resistance, as stated in claim 27, for the probe, absent any criticality, is only considered to be the “optimum” material that a person having ordinary skill in the art at the time the invention was made using routine experimentation would have found obvious to provide for the measuring resistance since it has been held to be a matter of obvious design choice and within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use of the invention. In re Leshin, 125 USPQ 416.

With respect to having the ceramic powder (ceramic/ MgO / oxygen-providing oxide compound) 22 with higher coefficient of thermal expansion than the protective tube 60: this limitation is satisfied since the protective tube 60 and the auxiliary portion 22 have the same materials as claimed by applicant, therefore, these materials would exhibit the same CTE, as the materials claimed by applicant.

Takahashi does not explicitly teach that the protective tube 60 has a tapered tip, a strain relief, and the particular material (admixture of oxygen-providing oxide compound) for the ceramic powder.

Davis discloses in Figs. 1-2 a device in the field of applicant's endeavor, wherein a protective tube has a tapered tip, a strain relief portion.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Takahashi so as to make a tip of a tapered shape, as taught by Davis, because the particular shape of the tip, absent any criticality, is only considered to be an obvious modification of the shape disclosed by Takahashi because the court has held that a change in shape or configuration, without criticality, is within the level of skill in the art as the particular shape claimed by applicant is nothing more than one of numerous shapes that a person having ordinary skill in the art will find obvious to provide. In re Dailey, 149 USPQ 47 (CCPA 1976).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Takahashi so as to have

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a strain relief portion, as taught by Davis, in order to protect the device from fracture in a harsh high temperature environment.

For claim 24: the use of the particular material, i.e., aluminum, for the auxiliary component, absent any criticality, is only considered to be the “optimum” material that a person having ordinary skill in the art at the time the invention was made using routine experimentation would have found obvious to provide for the auxiliary component of Takahashi 1 since it has been held to be a matter of obvious design choice and within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use of the invention. In re Leshin, 125 USPQ 416.

Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi 1 and Davis as applied to claims 22-30 above, and further in view of Takahashi (U.S. 6286995) [hereinafter Takahashi 2].

Takahashi 2 teaches that it is known that the protective member can be made by (deep) drawing on machining.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Takahashi 1 and Davis, so as to make the protection tube by drawing on machining, since this is a known method and thus does not require additional manufacturing costs.

Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi 1 and Davis as applied to claims 22-30 above, and further in view of Takahashi (U.S. 6286995) [hereinafter Takahashi 2] and Zondag (U.S. 4074630).

Takahashi 2 teaches that it is known that the protective member can be made by (deep) drawing on machining.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Takahashi 1 and Davis, so as to make the protection tube by drawing on machining, since this is a known method and thus does not require additional manufacturing costs.

Zondag teaches to make a tube by drilling.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Takahashi 1 and Davis, so as to make the protection tube by drilling, since this is a known method and thus does not require additional manufacturing costs.

Allowable Subject Matter

Claim 31 (or 32) and 33-34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 34 is considered to be dependent on claim 33.

Claim 35 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in the PTO-892 and not mentioned above disclose related devices and methods.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gail Verbitsky whose telephone number is 571/ 272-2253. The examiner can normally be reached on 7:30 to 4:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lisa Caputo can be reached on 571/ 272-2388. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gail Verbitsky
Primary Patent Examiner, TC 2800

August 21, 2009

/Gail Verbitsky/
Primary Examiner, Art Unit 2855

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